

What is Claimed is:

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1 A utility lighter, comprising:

5 a casing which has a lighter housing and a lighter rod upwardly extended therefrom, wherein said lighter housing has an internal cavity and a pusher cavity therein, wherein said lighter rod has an transmitting cavity communicated with said internal cavity therein and said lighter housing has a safety slot communicating said internal cavity and an exterior of said lighter housing;

a fuel storage housing disposed in said internal cavity of said lighter housing for storing liquefied gaseous fuel to ignite said utility lighter;

10 an ignition system which comprises:

a piezoelectric unit supported in said internal cavity for generating piezoelectricity, wherein said piezoelectric unit has a movable part and a fixed part;

a gas-emitting nozzle communicated with said fuel storage housing and adapted for releasing gaseous fuel when said gas-emitting nozzle is uplifted;

15 a gas tube extended from said gas-emitting nozzle to a top end portion of said lighter rod to form an ignition tip therein via said internal cavity and said transmitting cavity;

a spark-generating tip extended from said piezoelectric unit to said ignition tip via said internal cavity and said transmitting cavity, for generating sparks; and

20 a pusher button which is supported in said pusher cavity in a movable manner and operatively connected to said piezoelectric unit and said gas-emitting nozzle; and

a safety arrangement which comprises:

a stop post extended from a wall of said pusher button;

a locking member, which comprises a switching member extended outside said lighter housing through said safety slot and a stopper arranged for normally blocking up a downward movement of said pusher button, wherein said locking member is movably supported by said lighter housing and adapted for being switched between a locked position and an unlocked position, wherein, in said locked position, said stopper is aligned with said stop post to block said downward movement of said stopper, wherein, in said unlocked position, said stopper is moved out of alignment with said stop post to enable said pusher button to be moved downwardly to depress said movable part of said piezoelectric unit and generate sparks at said spark-generating tip to ignite gaseous fuel emitted from said ignition tip; and

a resilient element mounted in said lighter housing for urging a pushing force to said locking member so as to normally retain said locking member in said locked position.

2. The utility lighter, as recited in claim 1, wherein said safety arrangement further comprises a guider latch spacedly and parallelly formed adjacent to said stopper that defines a guiding slot therebetween.

3. The utility lighter, as recited in claim 1, wherein said safety slot is formed on a side wall of said lighter housing and said locking member further comprises a driver member connecting said switching member positioned outside the lighter housing to said stopper slidably supported inside said lighter housing via said safety slot.

4. The utility lighter, as recited in claim 2, wherein said safety slot is formed on a side wall of said lighter housing and said locking member further comprises a driver member connecting said switching member positioned outside the lighter housing to said stopper slidably supported inside said lighter housing via said safety slot.

5. The utility lighter, as recited in claim 2, wherein said locking member has two sliding cavities formed at two sides of said stopper for said guider latch and said stop post to be slid therein, wherein when said locking member is in said locked position, said stop post is positioned right above said stopper of said locking member and thus said downward movement of said pusher button is blocked and locked by said locking member, wherein when said locking member is switched to said unlocked position by operating said switching member until said stopper moves from right below said stop

post to right below said guider latch of said pusher button that, during said unlocking position, when said pusher button is depressed downwardly, a guiding end of said guider latch biases against a top end of said stopper that enables said pusher button to be further depressed that causes said locking member to move backward and drives said guider latch to move downwardly until said stopper is inserted into said guiding slot, so that said pusher button is free to be depressed to ignite said utility lighter, wherein after each ignition operation, said locking member of said utility lighter automatically returns to said locked position in which said pusher button and said locking member are rebounded back to said locked position by said resilient element and said piezoelectric unit respectively.

6. The utility lighter, as recited in claim 4, wherein said locking member has two sliding cavities formed at two sides of said stopper for said guider latch and said stop post to be slid therein, wherein when said locking member is in said locked position, said stop post is positioned right above said stopper of said locking member and thus said downward movement of said pusher button is blocked and locked by said locking member, wherein when said locking member is switched to said unlocked position by operating said switching member until said stopper moves from right below said stop post to right below said guider latch of said pusher button that, during said unlocking position, when said pusher button is depressed downwardly, a guiding end of said guider latch biases against a top end of said stopper that enables said pusher button to be further depressed that causes said locking member to move backward and drives said guider latch to move downwardly until said stopper is inserted into said guiding slot, so that said pusher button is free to be depressed to ignite said utility lighter, wherein after each ignition operation, said locking member of said utility lighter automatically returns to said locked position in which said pusher button and said locking member are rebounded back to said locked position by said resilient element and said piezoelectric unit respectively.

7. The utility lighter, as recited in claim 2, wherein said pusher button has a locking cavity provided therein for receiving said safety arrangement of said utility lighter, wherein said stop post and said guider latch of said safety arrangement are integrally projected from a top wall of said pusher button and downwardly extended vertically and spacedly inside said locking cavity of said pusher button.

8. The utility lighter, as recited in claim 4, wherein said pusher button has a locking cavity provided therein for receiving said safety arrangement of said utility lighter, wherein said stop post and said guider latch of said safety arrangement are integrally projected from a top wall of said pusher button and downwardly extended  
5 vertically and spacedly inside said locking cavity of said pusher button.

9. The utility lighter, as recited in claim 5, wherein said pusher button has a locking cavity provided therein for receiving said safety arrangement of said utility lighter, wherein said stop post and said guider latch of said safety arrangement are integrally projected from a top wall of said pusher button and downwardly extended  
10 vertically and spacedly inside said locking cavity of said pusher button.

10038007-040302 10. The utility lighter, as recited in claim 6, wherein said pusher button has a locking cavity provided therein for receiving said safety arrangement of said utility lighter, wherein said stop post and said guider latch of said safety arrangement are integrally projected from a top wall of said pusher button and downwardly extended  
15 vertically and spacedly inside said locking cavity of said pusher button.

11. The utility lighter, as recited in claim 2, wherein said guider latch has a tapered guiding end having a slanted surface which is inclined toward said stop post and adapted for biasing against a top end of said stopper.

10038007-040302 12. The utility lighter, as recited in claim 6, wherein said guider latch has a tapered guiding end having a slanted surface which is inclined toward said stop post and adapted for biasing against a top end of said stopper.  
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sub Q3 13. The utility lighter, as recited in claim 2, wherein said stop post and said guider latch are spacedly protruded from a bottom portion of a side surface of said pusher button.  
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14. The utility lighter, as recited in claim 4, wherein said stop post and said guider latch are spacedly protruded from a bottom portion of a side surface of said pusher button.

15. The utility lighter, as recited in claim 13, wherein said guider latch has a tapered guiding end having a slanted surface which is inclined toward said stop post and adapted for biasing against a top end of said stopper.

5 <sup>Sub 133</sup> 16. The utility lighter, as recited in claim 14, wherein said guider latch has a tapered guiding end having a slanted surface which is inclined toward said stop post and adapted for biasing against a top end of said stopper.

10 <sup>Sub 94</sup> 17. The utility lighter, as recited in claim 4, wherein said safety slot is in arc-shaped and said driver member has a bottom pivot end pivotally supported in said lighter housing and a top switch end connected to said stopper that normally positions right below said stop post of said pusher button, wherein during said locked position, said locking member is retained to be positioned right below a bottom end of said stop post so as to block said downward movement of said pusher button, wherein when said locking member is switched to said unlocked position by moving said switching member, said locking member is so pivoted until said stopper is positioned below said guiding end of  
15 said guider latch and adapted to fittedly bias against said guider latch in such a manner that when said pusher button is depressed downwardly, said stop post slightly pushes aside said stopper of said locking member that diverts said stopper to slide into said guiding slot, so that said pusher button is able to be depressed freely to ignite said utility lighter.

20 <sup>Sub 133</sup> 18. The utility lighter, as recited in claim 8, wherein said safety slot is in arc-shaped and said driver member has a bottom pivot end pivotally supported in said lighter housing and a top switch end connected to said stopper that normally positions right below said stop post of said pusher button, wherein during said locked position, said locking member is retained to be positioned right below a bottom end of said stop post so  
25 as to block said downward movement of said pusher button, wherein when said locking member is switched to said unlocked position by moving said switching member, said locking member is so pivoted until said stopper is positioned below said guiding end of said guider latch and adapted to fittedly bias against said guider latch in such a manner that when said pusher button is depressed downwardly, said stop post slightly pushes  
30 aside said stopper of said locking member that diverts said stopper to slide into said guiding slot, so that said pusher button is able to be depressed freely to ignite said utility lighter.

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19. The utility lighter, as recited in claim 4, wherein said driver member of said locking member is a connecting arm transversely and slidably mounted in said lighter housing with respect to said lighter housing, wherein said locking member has an outer end connected to said switching member and an inner end connected to said stopper until said stopper is longitudinally extended, with respect to said lighter housing, to position right below said stop post for biasing against said stop post in said locking cavity when said locking member is in said locked position, wherein when said locking member is in said locked position, said stopper is positioned right below said stop post in said locking cavity to block said downward movement of said pusher button, wherein by pushing down said switching member, said locking member is driven to said unlocked position that said top end of said stopper of said locking member is pushed to move to a position right below said guiding end of said guider latch that, when said pusher button is depressed gradually, said slanted surface slightly pushes said locking member aside and said stopper slides into said guiding slot, so that said pusher button is able to be completely depress to ignite said utility lighter.

20. The utility lighter, as recited in claim 8, wherein said driver member of said locking member is a connecting arm transversely and slidably mounted in said lighter housing with respect to said lighter housing, wherein said locking member has an outer end connected to said switching member and an inner end connected to said stopper until said stopper is longitudinally extended, with respect to said lighter housing, to position right below said stop post for biasing against said stop post in said locking cavity when said locking member is in said locked position, wherein when said locking member is in said locked position, said stopper is positioned right below said stop post in said locking cavity to block said downward movement of said pusher button, wherein by pushing down said switching member, said locking member is driven to said unlocked position that said top end of said stopper of said locking member is pushed to move to a position right below said guiding end of said guider latch that, when said pusher button is depressed gradually, said slanted surface slightly pushes said locking member aside and said stopper slides into said guiding slot, so that said pusher button is able to be completely depress to ignite said utility lighter.